Amendments to the Specification:

Please replace paragraph [0001] with the following amended paragraph:

[0001] The invention relates to the treatment of melts, especially of glass melts. The invention relates above all to ~~structure~~ structural components that are used here.

Please replace paragraph [0002] with the following amended paragraph:

[0002] For the treatment of glass ~~melts tanks~~ melts, tanks or crucibles are used both for the production of a melt and also for its refining. After the refining process there is engaged a homogenization step. In all these treatment steps ~~structure~~ structural components of the most diverse nature are brought into the liquid melt. In the fusion process there are, for example, ~~electrodes, with~~ electrodes with which thermal energy is introduced into the melt by reason of the Joule effect. In the refining, tubes are brought into the melt for the introduction of gases. In the homogenizing process, an agitator rotates in the melt.

Please replace paragraph [0003] with the following amended paragraph:

[0003] Such structural components plunging into the melt are constructed ~~with use~~ with the use of noble metals or of noble metal alloys. The temperature here is a critical magnitude. At high temperatures, namely, the solidity of noble metals decreases. Furthermore, the danger of corrosive attack of the noble metal by the melt increases. As a remedy the structural components mentioned are provided with a cooling system in which a cooling medium is led through the interior of the structural component. Depending on the requirements, there comes into consideration ~~as cooling~~ as the cooling medium oil, water, air, or other substances.

Please delete paragraph [0007] in its entirety.

Please replace paragraph [0009] with the following amended paragraph:

[0009] The thought of using ~~as coating~~ as a coating material a material the melting or decomposition temperature of which lies below the prevailing environmental temperature must at first glance appear absurd. The inventors, however, have perceived the following: The cooling of the structural component concerned ~~brings it about that~~ causes the contact temperature between the coating material on the one hand, and the surrounding melt on the other hand, ~~remains~~ to remain below the decomposition or fusion temperature of the coating material. In tests it has proved, surprisingly, that even plastics coatings with a decomposition temperature of below 300° C. withstand use in vessels where temperatures ~~exceeds~~ exceed 1300° C. A precondition is the correct attuning between the cooling on the one hand and the coating on the other hand. In detail this means that the parameters of the cooling throughput and the temperatures of the cooling medium, the thermal conductivity, the wall thickness, the construction as well as the parameters of the coating--coating thickness, thermal conductivity--must be correctly dimensioned. ~~As coating~~ As a coating material there come into consideration low-melting metals, alloys as well as plastics.

Please replace paragraph [0010] with the following amended paragraph:

[0010] For the suppression of condensation and crystallization in the gas space, with simultaneous electrical insulation, plastics have proved especially well-suited. Especially halogen-containing, comparatively temperature-stable plastics such as ~~teflon~~ Teflon (PTFE) or perfluoro-alkoxy (PFA), plastics with decomposition temperatures of ca. 300° C. have proved satisfactory. With efficient water cooling and well thermo-conductive carrier materials, however, there are also usable cheaper, lower melting plastics such as polypropylene (PP), polyethylene (PE) or polyvinyl chloride (PVC).

Please add the following new paragraph after paragraph [0010]:

[0010.1] The coating thickness may be less than 1 mm, may be between 20 μ and 250 μ and preferably between 40 μ and 200 μ. The base body of the structural component may be

made of copper, platinum, steel or alloys of the metals. One example of a structural component is an electrode holder.

Please replace paragraph [0011] with the following amended paragraph:

[0011] The effect of the suppression of condensation and crystallization is based on certain phenomena: on the one hand by the thermal insulation effect of the plastic, the surface temperature of the metal-plastic bonding system is brought to values above 100° C., ~~so that a water (as solvent~~ so that water (as a solvent for all other substances contained in the atmosphere) condenses more.

Please replace paragraph [0014] with the following amended paragraph:

[0014] By use of the invention it is ensured that cooled structural components that are present either in a hot melt or in the gas space ~~above it, are~~ above it are dependably protected against corrosion. Simultaneously, the cooling system solves the problem posed, inasmuch as it provides that the structural component concerned is itself protected against excessively high temperatures.

Please replace paragraph [0017] with the following amended paragraph:

[0017] In the production of highly pure glasses for fiber ~~optics wave~~ optical wave guides, a rotating PFA-coated agitator was used for the homogenization. The agitator consisted of a permeable copper tube corresponding to an inverted T, which was coated externally with a 250 μ-thick PFA layer and through which the cooling water was made to flow. As a result of the cooling a hardened glass layer developed on the portion of the agitator immersed in the melt. ~~Even in use of several~~ Even after being in use for several hours, the coating remained preserved; a green coloration of adherent glass characteristic for a cooper contamination did not appear. On the portion of the agitator that was above the melt, only very slight condensation or evaporating glass components appeared. Tests with water-cooled copper structural components with thinner PTFE layers were likewise successful.

Please replace paragraph [0018] with the following amended paragraph:

[0018] For the introduction of chlorine gas into laser glass melts, intended to lower their ~~OH-content there~~ OH-content, there was used a water-cooled double tube of platinum with a 150 μ-thick PFA outer coating. On the immersed portion of the tube there was likewise formed a hardened glass layer; the plastic layer was not attacked. On the portion lying above the melt, where with the use of uncoated introduction ~~tubes, a larger~~ tubes a larger number of crystals formed, no crystals were found.

Please replace paragraph [0020] with the following amended paragraph:

[0020] The layer thickness of the coating material must not be too great. The reason for this is as follows: plastic is, as is well known, a heat insulator and thus it hampers the heat flow from the one side of the coating to the other. If the layer is too thick, then this can lead to the result that from the melt that is present in the contact zone with the plastic, ~~no longer sufficient~~ insufficient heat is drawn off by the cooling medium flowing in the metallic object. The contact zone then takes on temperatures that lie above the decomposition temperature of the plastic.